

WHAT IS CLAIMED IS:

- 1 1. A thermoelectric semiconductor element, comprising:
2 a first section; and
3 a second section, wherein a cross-section of the first section is greater than a
4 cross-section of the second section.

- 1 2. The thermoelectric semiconductor element according to claim 1, wherein the first
2 section is adjacent to a hot side of the thermoelectric semiconductor element.

- 1 3. The thermoelectric semiconductor element according to claim 1, wherein the
2 second section is adjacent to a cold side of the thermoelectric semiconductor element.

- 1 4. The thermoelectric semiconductor element according to claim 1, wherein the first
2 section is closer to a hot side of the thermoelectric semiconductor element than the second
3 section.

- 1 5. The thermoelectric semiconductor element according to claim 1, wherein the
2 thermoelectric semiconductor element is asymmetrical.

- 1 6. A semiconductor thermoelectric module, comprising:
2 a plurality of semiconductor elements each having a first section and a second
3 section, wherein a cross-section of the first section is greater than a cross-section of the
4 second section.

1 7. The semiconductor thermoelectric module according to claim 6, wherein the first
2 section is adjacent to a hot side of the semiconductor thermoelectric module.

1 8. The semiconductor thermoelectric module according to claim 6, wherein the
2 second section is adjacent to a cold side of the semiconductor thermoelectric module.

1 9. The semiconductor thermoelectric module according to claim 6, wherein the first
2 section is closer to a hot side of the semiconductor thermoelectric module than the second
3 section.

1 10. The semiconductor thermoelectric module according to claim 6, wherein the
2 semiconductor elements are asymmetrical.

1 11. A semiconductor thermoelectric generator, comprising:
2 a plurality of thermoelectric modules each having a plurality of semiconductor
3 elements connected electrically in series via electrical conductors to a first side of the
4 thermoelectric modules and to a second side of the thermoelectric modules, wherein each
5 of the plurality of semiconductor elements has a first section and a second section, and a
6 cross-section of the first section is greater than a cross-section of the second section.

1 12. The semiconductor thermoelectric generator according to claim 11, wherein the
2 first section is adjacent to a hot side of the semiconductor thermoelectric modules.

1 13. The semiconductor thermoelectric generator according to claim 11, wherein the
2 second section is adjacent to a cold side of the semiconductor thermoelectric modules.

1 14. The semiconductor thermoelectric generator according to claim 11, wherein the
2 first section is closer to a hot side of the semiconductor thermoelectric modules than the second
3 section.

1 15. The semiconductor thermoelectric generator according to claim 11, wherein the
2 semiconductor elements are asymmetrical.

1 16. A thermoelectric semiconductor element, comprising:
2 a first section; and
3 a second section, wherein a heat path of the first section is greater than a heat path
4 of the second section.

1 17. The thermoelectric semiconductor element according to claim 16, wherein the
2 first section is adjacent to a hot side of the thermoelectric semiconductor element.

1 18. The thermoelectric semiconductor element according to claim 16, wherein the
2 second section is adjacent to a cold side of the thermoelectric semiconductor element.

1 19. The thermoelectric semiconductor element according to claim 16, wherein the
2 first section is closer to a hot side of the thermoelectric semiconductor element than the second
3 section.

1 20. The thermoelectric semiconductor element according to claim 16, wherein the
2 thermoelectric semiconductor element is asymmetrical.